



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,539	08/29/2001	Michael M. Ramarge	08215-467001	4733

26171 7590 04/18/2003

FISH & RICHARDSON P.C.  
1425 K STREET, N.W.  
11TH FLOOR  
WASHINGTON, DC 20005-3500

EXAMINER

EASTHOM, KARL D

ART UNIT PAPER NUMBER

2832

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/940,539

Applicant(s)

Ramarge et al.

Examiner

Karl Easthom

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 5, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5-20, and 22-96 is/are pending in the application.
- 4a) Of the above, claim(s) 28-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-20, 22-27, and 55-96 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 2832

1. Claims 95-96 are rejected under 35 U.S.C. 102(b) as being anticipated by Kester et al.

The claimed invention is disclosed at Figs. 9, and 11 with bonded stack 12, 18, 12, and reinforcing structure 125, having epoxy resin and random fibers 126 as depicted. The 10kA, 10kV heavy duty rating allows the device to withstand a shorter pulse of 100kA, or "any size or rating" is disclosed at col. 4, lines 10-24, meeting the claims. In claims 25 and 26, the matrix is circumferentially and vertically applied since it circles the device and extends from end to end. Or the fibrous tapes 24 9 (vertical) or 28(vertical and circumferential) are preimpregnated with resins 22 or 25-27. See col. 6, lines 34-50, disclosing the preimpregnation of the fibrous tapes.

2. Claims 22-27 and 66-93 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of Donnola. Kester discloses the claimed essentially invention except for the pre-woven fabric. Donnola discloses the pre-woven fabric 310 for devices such as that of Kester to improve the reliability of such arrestors, at col. 3, where the type of fiber tape of Kester is stated as known at col. 3, lines 14-18, and it would have been obvious to employ a fabric having a mesh size to allow gas to escape as noted at col. 5, lines 5-15. The rating of several tens of KA meets the 100kA pulse limitation at col. 1, lines 20-27, where they withstand rms voltage of 1kV for example and thus are able to handle more energy than that of a limited pulse duration, which would have been obvious to employ to suit the application of high current relief. Or the heavy duty 10kA, rated 10kV devices of Kester<sup>1</sup> can also inherently handle such a pulse of given limited

---

<sup>1</sup>The ANSI C62.11 standards cited at col. 9, lines 45-65 of Kester also include a 100kA short duration pulse test. See the Polymer Distribution articles cited, under the section Design

Art Unit: 2832

duration since the same type of device as that including the reinforcing structure as that of applicant is employed, since it can handle the 10kA at 10kV at longer durations, or same is obvious where Kester discloses the invention at col. 4, lines 10-25 as suitable for any size or rating. In claims 25-27, the matrix is circumferentially and vertically applied due to the fibrous tapes 24 (vertical) or 28(vertical and circumferential) are preimpregnated with resins 22 or 25-27. See col. 6, lines 34-50, disclosing the preimpregnation of the fibrous tapes. Similar remarks apply to claims 66-93 where employing the fabric of Donnola for one of the tapes 24 or 28 means fibers will go perpendicular, parallel, and at an angle to the axis, predetermined with respect to the winding thereof. The fibers 126 are shown at random at Fig. 9 for claims related to that element.

3. Claims 1, 3, 5-20 and 55-65 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of Donnola, further in view of Schmidt. Kester with Donnola discloses the claimed invention as noted above, except for only one disc. Schmidt discloses "at least one", and Kester discloses "any number" or "any size or rating" at col. 4, lines 10-35, so that it would have been obvious to limit the device to one varistor in order to make the rating smaller or to limit the size. That is, the electrical apparatus is disclosed at col. 4, lines 25-35 as "relat[ed] to the coating" and "not limited to any particular ... number". Consequently the number "one" is contemplated for the disks, where one of skill would contemplate using the coating on one disk, meeting the claim, since the number one is included in the three devices of fig. 1. Schmidt also discloses using only one disk in a similar apparatus depicted as having three elements, disclosing

---

Tests.

Art Unit: 2832

explicitly "at least one block" at col. 1, lines 40-50, so that it would have been obvious to employ only one block especially where the invention of Kester et al. is directed to the coating. For claims 2-4, see col. 4, lines 15-20. For claims 5-9, col. 6, lines 34-50 disclose fibers in the tape as strands so that they have predetermined and uniform length less than the length of the tape, where the tape is substantially equal to the array length. In claim 7, the random fibers 126 meet the claim. In claim 12, the tape 28 is circumferential. In claims 18-19, see tape 24. In claim 15, the angle of tape 28 is "approximately" at 10 degrees where the term is broadly construed. Or, it the fibers are at about 3 degrees with respect to the tape, where there is no frame of reference. The disc stack is bonded by the jackets or windings.

4. Claim 94 is rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of in view of Schmidt. Kester discloses the invention as noted with respect to claims 95-96 above, except the number one. This is noted as above as obvious for the reasons noted, incorporated here.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 2832

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Easthom whose telephone number is (703)308-3306. The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad, can be reached on (703)308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



**KARL D. EASTHOM  
PRIMARY EXAMINER**